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The
**UNPREDICTABLE
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due to depending wholly on turning or "high lining" in eradicating insect infestation from stored grain.

However, the temperature of grain cannot be lowered many degrees by a single turning.

The real trouble is that no two lots of grain are the same—weather and storing conditions vary, and moisture content itself may vary within the single lot, as also may the degree of infestation.

Such factors are unpredictable, and are bound to give many a headache and wreak havoc with the ultimate results. Naturally, the goal of everyone is to reduce the ratio of loss due to infestation with the greatest economy.

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It has unexcelled killing power; simple application with unsurpassed consistency in results; leaving no odor or other bad effect on grain. Write for methods best adapted to your situation. This information on combating and overcoming infestation is the culmination of tests under any and all conditions of storing grain.

We have numerous letters of appreciation from customers whom we have aided with their specific problems.

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KANSAS CITY, MO.



INTELLIGENT SELFISHNESS

"A man working by himself cannot produce very much. A thousand shoemakers, each one working in his own shop and doing all the work himself, cannot turn out very many thousand pairs of shoes per week. These same thousand men working together in a modern industrial organization known as a factory, and working with modern machines, could produce many times more shoes, and they would be much better shoes and cost much less.

"In this day and age practically all industrial work is work done in association with others. That is the only efficient system. It is the working with others that permits large scale production at low unit costs so that people can buy. And it is their buying that determines wages and makes good times.

"Those who are skilled at their tasks, and who work well with others, are necessary to the success of any industrial enterprise. Skill and cooperation are likewise necessary to the success of the workers themselves. To get ahead today skill alone is not enough. One must also be able to get along with people and to work well with others."
— St. Croix Observer.

We hope Elevator Owners and Managers will take note of this. The first sentence of the second paragraph tells what is (or should be) true of the grain business and all other industry. Help your Superintendents to join the Society — not for philanthropic reasons — simply because of intelligent selfishness. In the greater knowledge your Superintendents gain from contacts with other Society members you will find a gold mine of better and more efficient operation of your plant and friendship and appreciation from your men.

SOCIETY OF GRAIN ELEVATOR SUPERINTENDENTS

Board of Trade Building

Chicago, Illinois

Editorial

PATIENCE

ON ONE of those peculiar days when everything seems to go wrong and the tasks at hand become menial and unworthy of attention, I stopped a moment to remember the way that a river slowly winds among the hills to reach the sea. I thought of an airplane zooming homeward the long way around to escape storms and fog. A sailboat silently tacking its way in a zigzag course across a broad lake.

For it occurred to me that so it was with the man who would make the most of his fleeting days. Seldom can he move directly towards his goal; but more often he must move intelligently, with the wind, first off to the left, then right, at times even retreating.

Wasn't it that way with the small town editor who was also a printer and a President?

Wasn't that the case with the mechanic who was once a laborer and later a leader in the motor car industry?

Wasn't it that way with the advertising copy-writer who became a college president?

The storms of expediency often force the reefing of sails and the putting in at ports of call that seem strange on the log of the completed voyage. But in the midst of the crossing, I must not become alarmed. I must remain composed, heeding the tiny voice that whispers patience, patience.

GRAIN, Board of Trade, 141 W. Jackson Boulevard, Chicago, Ill. Telephone Wabash 3111. A forum for operative and mechanical problems in terminal and sub-terminal grain handling and processing plants. Published monthly on the tenth. DEAN M. CLARK, Publisher; KEN VIX, Editor; C. GIBSON FRANKS, Staff Artist.

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The Canadian Position

By R. P. Pow, Reliance Grain Co., Ltd., Fort William, Ont., Director, Society of Grain Elevator Superintendents, before the Grain & Feed Dealers National Association, Louisville, Ky., Oct. 14-15, 1940

IT IS a privilege for anyone to have the opportunity of addressing a gathering such as this, but to me, coming to you as I do from a country presently engaged in an all out struggle for self preservation, it is more than a privilege. It is a trust and a duty laid upon me and I hope that I may be able to maintain the one and perform the other. No academic subject has been assigned to me, and it had not been intimated to me what to discuss. This has made it all the harder to prepare myself to come before you with something that will interest you and also make a contribution to the program of your Convention.

We are all interested in the grain trade, and in your country, as in mine, the problems of the trade are matters of major importance to us all. With us just now it is a problem of taking care of the huge crop that nature has so bountifully produced on our great prairies. There is an old French proverb which in effect says: "God tempers the wind to the shorn lamb," and it would seem that in our extremity Providence has decreed we will have a sufficiency of food to take care of all our needs. More than this, we have abundance to spare for the hungry millions in other lands, when the time comes when we can send it to them with certainty that it will not be used to feed those whose hand now is raised to destroy us.

"U" BOATS NOTWITHSTANDING

THIS year we have a wheat crop of 561,000,000 bushels, the second largest we have ever grown and this, with the 260,000,000 bushel carry-over from last year's crop, will give us a total of about 820,000,000 bushels to take care of. Normally about 75,000,000 bushels are retained on the farms for seed and feed so we have about 745,000,000 bushels for which to provide storage. The total elevator storage capacity in Canada is about 424,000,000 bushels divided approximately as follows:

Country elevators in Man., Sask., Alta., and B. C.	190,662,000
Interior private and mill elevators	14,641,000
Interior public and semi-public elevators	20,730,000
Pacific Coast elevators	22,850,000
Fort William & Port Arthur elevators	92,650,000

Ontario Country elevators...	97,000
Lower Lake port elevators..	51,850,000
Quebec seaboard port elevators	25,537,000
Maritime seaboard port elevators	5,276,000

With these all filled there remains some 300,000,000 to be taken care of on farms and in other places. There is talk now of constructing an additional 100,000,000 storage at eastern points. This would take time and it seems that some scheme of assisted farm storage would more quickly provide room when it is needed to protect the grain. We have sold to Great Britain 200,000,000 bushels and if she could take immediate delivery our problem of storage in the main would disappear. But Britain cannot take delivery for the very good reason that, at the moment, she has eight months' supply on her hands and her bins are all full. "U" boats and bombing planes notwithstanding, when she can accommodate more wheat she will send her convoys over to get it and you can depend upon its being safely landed at British ports.

INCREASE IN PROCESSING

NATURALLY, the war is interfering with old established order and German bombing attacks on Britain directed as they are primarily against food supplies likely will make it necessary to process a greater percentage of wheat on this continent. These sky raiders usually engage in indiscriminate bombing but occasionally they do single out definite targets. You and I know what a prominent feature on the landscape is provided by a large flour mill. Some of these have been damaged but even if they all were to be put out of business the Briton still would get his flour. The mills of Canada assisted by the great milling concerns of the United States concentrated at Buffalo, Minneapolis and other places easily can take over, and the British navy will guarantee delivery. This trend is indicated by a recent increase of 16½% in wheat flour production and an increase of 47½% in wheat flour exports. Millings of other grains showed even greater percentage gains. The British Cereal Import Committee has just reported a purchase of 800,000 barrels of flour.

ECONOMIC CONTROL

WITH such a huge volume of wheat backed up in the country from seaboard right through all the terminal and country elevators to the farms themselves, it follows naturally that one of the major problems confronting our Federal Government is that of financing the individual farmer. He has to have money to pay his harvesting costs and to meet payments on machinery, supplies and taxes.

Since the depression years there has existed in Canada what is known as a Wheat Board. Prices were pegged by the Government in those years when prices sank so low that calamity faced the farmer unless he could get a better return than that offered by world markets. Realizing that the stability of the economic system depended on the solvency of the farming community, prices were established that gave a fair return to the producer.

In those years in which market prices rose above the "peg" the Wheat Board did not function but when prices fell below the "peg" the Board took delivery of all wheat tendered to it at country or other delivery points. At one time it looked as though the Treasury of the Dominion was in for a severe trimming as a result of the operation of the plan, but the sudden improvement in prices some two years ago enabled the Board to dispose of its large accumulation built up in the low price years, at figures, which, if they did not show a profit, at least enabled them to break about even. When the war broke out the Board took over all grain except that traded through regular channels for use by the millers.

This year the price is pegged at 70c in store Fort William which means that the farmer gets 70c for One Northern wheat less freight from his station to the Lakehead. Spreads on lower grades are also set. When the new crop began to move each farmer was allowed a quota of five bushels per seeded acre representing the amount of grain he could deliver to his local elevator and get his money for the grain he delivered. If a farmer was in the habit of delivering

to two or more points he had to designate the point at which he wished to make his quota deliveries. Severe penalties were provided for anyone exceeding his quota. The quota has lately been raised to eight bushels per seeded acre and at a few points to 12 bushels. The increase has been made possible mainly through facilities provided by the line elevator companies. These companies have at many points, built annexes varying in size from 30,000 to 150,000 bushels.

PRESENT PROBLEM

THE Wheat board allows storage charges 1/45c per bushel per day. There is now being developed a scheme under which the farmer will get the same storage allowance on grain stored on the farm. So far it has not been possible to devise a satisfactory means of making advances on farm stored grain but when such grain is ultimately made available at delivery points, the storage allowance will be added to the price paid.

The Wheat Board announced recently that it would take deliveries of the carry-over of the 1939 crop which previously had been excluded from the arrangements made in regard to the 1940 crop. With this back log removed the trend in prices has been stronger and they have gone fractionally above the pegged price, indicating that mills and elevators are again hedging in the open market. Nevertheless, the Wheat Board controls and will continue to control the great bulk of the wheat in Canada.

There is no restriction in the movement of coarse grains. The short crop of field grains in Eastern Canada this year provides a domestic market that is readily absorbing all offerings.

So much for a brief review of the grain situation in Canada. It is a major problem in our economy, but we have many such problems, and we have that faith in ourselves which makes us confident that eventually we will solve them all. We are a nation at war and our national economy must of necessity be subservient to our war effort. Perhaps I should say that our national life must be so ordered that in all its ramifications it leads to the one goal, and the one goal only of victory over the aggressor, and it must bring small comfort to the enemy to see the manner in which the farmers, the country elevators, the terminal and transfer elevators, the railroads, the Steamship Companies, the marketing agencies and the departments of the Government Inspection and Weighing service, are coordinating their various functions. In times of peace the very existence of these institutions depends on careful and efficient management, so it naturally follows that they can make effective practical contribution to the job now bulking so large on their horizon.

SUPERINTENDENT'S "CALM BEFORE THE STORM"

THIS congestion has put the elevator superintendent "in the groove" as it were. For the duration he can move only within prescribed limits inside a circle whose radius is the extent of the outward shipment allotted to him and whose circumference is bounded on all segments by the vast amount of possible business he could do if he could only get at it. For the present, he no longer ventures forth at dawn to unload the roving boxcar in such numbers as he hopes will constitute a record nor does he

stand on the dock at midday haloed in a dusty atmosphere listening to the steady stream of golden grain flowing down the loading spouts into capacious cargo holds, nor does he wearily wend his way home late at night to snatch a few hours frenzied rest 'ere he again mounts the treadmill of the day. He can now lay himself down to quiet slumbers and gentle sleep forgetting the night long nightmares of choked legs, broken shunts, missed grades and wasted minutes that formerly surged and lunged about his pillow.

For the present the pressure is off and he has practically nothing to do, that is nothing to do except "decide what is best to be done, tell somebody to do it, listen to reasons why it should not be done, or should be done by somebody else or why it should be done in a different way; follow up to see if the thing has been done; follow up a second time to discover that it has been done, but done incorrectly, consider how much simpler and better it would have been if he had done it himself in the first place," keep expenses down and at the same time be ready instantly to keep abreast of any movement that may eventuate; to take his full share of the work and responsibilities placed on all citizens of our country by reason of the exigencies of war; to take his place beside the statesman, the business man, the artisan, the professional man, the worker in field, forest, mine and factory and to help dovetail them all into an efficient effective unit of defense against aggression.

CANADIAN WAR EFFORT HUGE

DEMOCRACIES, because they exist by reason of the association of the free and independent individuals that compose them, cannot in time of peace, prepare for war. They assume that like themselves all men should desire peace and liberty and that all men should be free. They are at a disadvantage when massed forces of aggrandizement and destruction, led by unscrupulous leaders who desire power for the sake of power alone, are loosed upon them. They have to reconstruct their whole economy to meet the threat, and if they can withstand the first shock of battle as we have done they will win the last battle, for they fight and contend not for honor or power or glory, but for that freedom which no man would save his life to lose. That is why the Dictators cannot win in this struggle, though Czechoslovakia be dismembered, though Poland be overrun, Belgium, Holland, Denmark and Norway raped and despoiled France made to bear the invaders' yoke.

Unconquerable and inextinguishable there burns in the breasts of the men of the English speaking race the flame of liberty lighted at Runnymede, renewed at Concord, fed from the eter-

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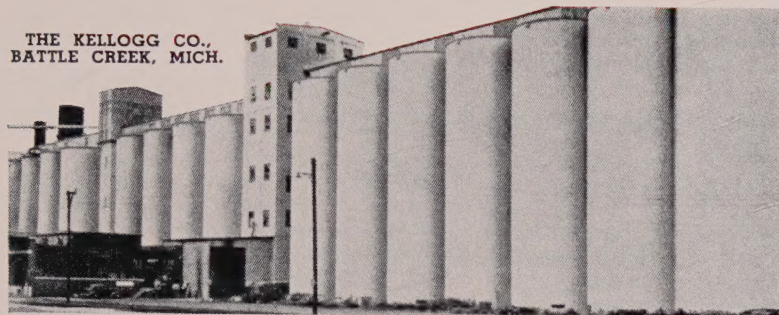
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nal truth of Calvary that will sustain and ensure us victory over all the hosts of brutish barbarism that may array against us. So we continue to build our defenses against the invader and strengthen our armed forces against the day when we shall abandon defense for offense.

CIVILIZATION WILL TRIUMPH

AT the present time the brunt is being borne by that gallant company of heroes who have so splendidly defended the skies and shores of Britain. Of them Prime Minister Churchill said, "Never in the history of the world have so many people been indebted for so much to so few." They are doing their job well and help for them is going forward even now. Our Empire Air Training Scheme, scheduled to come into full usefulness by the end of 1941, is speeded up so that November of this year will see all of the 1941 work completed. Fully trained pilots will go over in hundreds by the end of this year; our effort is geared to perfect 50,000 airmen in 1941, and the instruction will be thorough. In the words of our Minister of National Defense for Air, Hon. C. G. Power, "When our graduate goes forth he stands alone. He will not have beside him when his real test comes the advantage of advice from mature years and successful experience. It is essential that this instruction shall be thorough, efficient and complete for on these graduates depends in large measure the lives and future destiny of the nation." He well could have taken in more territory for on them will depend the future destiny of the world.

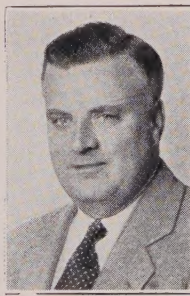
The other arms of our forces are receiving the same careful preparation, as we move towards attaining the all out effort demanded by the all out war that is upon us.

I have digressed, I have not con-

veyed either by spouting or belting a discussion strictly in accordance with the purpose of this Convention but I can make no apology for doing so. I know that our ways of life are even as yours, in home, in business and in the multitude of commonplaces that go to make up the round of our daily associations. I feel that you would help us more than you are doing if such help would result in greater aid than you are at present giving. Up to now you have been helping us more than if you had declared war on our side. We need the planes, the munitions, the ships and the myriad other supplies we are getting and if you were at war you would need them for yourselves. I sense the strength and the promise latent in the vibrant living freedom coursing with and mingled in the bloodstream of both our peoples. From it all I catch the vision of our two great Empires in the vanguard of the march of mankind to those ideals of liberty, peace and goodwill which we desire, not for ourselves alone but for all the people on the earth.



R. B. Pow and Percy C. Poulton



Following Mr. Pow's remarks, the Society's President, Mr. Percy C. Poulton of N. M. Paterson & Co., Fort William, opened his address by thanking Vice-President Ray Bowden for

the privilege of addressing such a large gathering of representative grain men and then briefly outlined the aims and objects of the Society of Grain Elevator Superintendents. He concluded his remarks with the following words:

"Gentlemen, if there be one thing I should like to state to you more emphatically than any other of my remarks, it is that I should like to have you definitely understand that our Society is a strictly selfless and non-personal organization. If this were not a fact, I am confident we could not boast among our members such men as my fellow citizen, Mr. R. B. Pow, or myself for that matter. We have both been employed by our present employers for many years and assure you we need no one to intercede with our employers on our behalf.

"To state our aims in a few words, I would say our Society is a body of serious elevator men, grouped together for no other purpose than to learn by friendly contact with each other, how best we may become better suited to operate our plants more safely, more economically, and to become worthy custodians of the plants entrusted to our care.

"I would be remiss in my duty, and ungrateful if I did not here acknowledge with sincere appreciation the great help and encouragement given the Society by you men, the heads of the companies employing our members. In behalf of the Society I want to ask for this continued cooperation."

Typifies the Magnitude

THE sight of a freight car being lifted and tipped back and forth as though it were held between a gigantic thumb and finger somehow typifies the magnitude of the grain elevator industry.—*Milling Production.*

Static Electricity as a Fire Hazard and Its Control

By E. E. TURKINGTON

Engineer, Inspection Department, Associated Factory Mutual Fire Insurance Companies

STATIC electricity is the cause of many fires and explosions. The fires may be the result of actual ignition of combustible material by static sparks, or static electric charges, too small to be a fire hazard in themselves, may indirectly result in fire by causing finely divided stock to adhere to parts of a machine to such an extent that excessive mechanical friction results.

Static electricity may also be the indirect cause of injury due to reflex muscular action of persons working near fast-moving machinery.

Static electricity is generated in a number of industrial operations, but in many cases it is dissipated or neutralized without becoming a fire or accident hazard. However, static charges may also cause inconvenience, slow up production, or result in an inferior product, and its elimination is of great importance. It is not possible to prevent this generation, but it is possible to prevent accumulations of such quantity and potential that sparks may result. This can be accomplished by humidification, bonding and grounding, ionization, or a combination of these methods.

1. Humidification

FIRES caused by static electricity are much more frequent in winter when artificial heating is required and the indoor humidity is low. If outdoor air at a temperature of 32 degrees F. and relative humidity of 50 per cent is taken into a building and heated to 70 degrees F. without the addition of any moisture, the relative humidity will be about 13 per cent. In order to maintain a relative humidity of 50 per cent at the higher temperature in a room 100 feet square and 12 feet high, for example, it would be necessary to add a little more than six gallons of water.

It has been shown that many substances, ordinarily considered non-conductors, will conduct electricity to some extent in an atmosphere in which the humidity is relatively high. This is undoubtedly due to a thin film of moisture on the surfaces of the so-called non-conductors. The surface conductivity of many materials changes through wide limits when the humidity is varied. For example, the surface conductivity of plate glass at 50 per cent relative humidity is about 1000 times that at 20 per cent humidity. It would thus appear that dangerous accumulations of static electricity could be prevented in all

cases by maintaining a relatively high humidity.

Unfortunately it is not feasible to humidify all rooms because many substances, such as grain and grain products, are injured by moisture. Moreover, the minimum amount of humidification required under various conditions is not definitely known. A relative humidity of 40 per cent to 50 per cent in the rubber spreading room of a certain rubber factory, however, practically eliminated fires where previously 122 fires had occurred in a three year period. It is believed that a relative humidity of 50 per cent to 60 per cent will prevent dangerous accumulations of static electricity in practically all cases. It should be remembered, however, that if parts of machines are operated at high tem-

THIS should make you worry, but if you follow the suggestions given by Mr. Turkington static electricity will cease to be a peril in your plant. Surprisingly simple solutions to the problem are given which will cover everything you know about danger from static and a lot that you've never even dreamed of.

peratures the relative humidity near the heated parts may be dangerously low, even though the remainder of the room may be maintained at 50 per cent humidity.

Relatively high humidity has another effect in preventing fires in the textile industry in addition to that of preventing charges of static electricity. It has been shown experimentally that when the amount of moisture in cotton or other fibres is relatively high, the danger of ignition by static sparks is slight.

Humidification may be obtained by means of steam jets, unit humidifiers, or air-conditioning and ventilating systems, and unless it is automatically controlled it should be checked periodically with an accurate hygrometer.

2. Ionization

IONIZATION of the air is another method which has been employed to remove static charges from materials, such as paper, textile fibres and fabrics. Air is ordinarily a non-conductor of electricity, but when ionized it will conduct static charges to grounded parts of the machine. Static neutralizers are available which ion-

ize the air by means of high voltage brush discharges from a series of points connected through small condensers with the high voltage winding of a small transformer delivering several thousand volts. The electric neutralizer is approved for use in woolen, silk, cotton and paper mills, printing shops, etc.

Ionization by gas flames is another method which has been employed in printing shops. The sheets of paper are passed rapidly through gas flames as they leave the presses and all static charges are conducted to ground. Obviously this method is limited in application and cannot be used where inks having volatile flammable thinners are employed, or in any hazardous location.

3. Bonding and Grounding

(a) Metal Objects. Grounding the metal parts of a machine to a water pipe or other low resistance ground is often the cheapest and most effective method of static elimination. However, a single ground wire connected to an all-metal machine at one point may not be sufficient to ground all of its parts. Paint, rust, or corrosion may insulate one part from another and a film of lubricating oil may insulate a rotating shaft or roll so that dangerous accumulations of static electricity will occur. Metal parts which are isolated or insulated should be bonded together or separately grounded. Graphite mixed with the lubricating oil will sometimes serve as a satisfactory grounding method for revolving parts, but it is usually safer to provide a grounding brush or wiper, which makes contact with the surface of the moving parts.

Although small bare wires or solid metal strips may make satisfactory electrical connections, a copper wire as large as No. 6 or No. 4 B. & S. gage is advised for the ground connection, owing to its mechanical strength, and in insulated wire is less likely to be tampered with. The ground wire should be carefully maintained and tests should be made periodically to insure its continued effectiveness. A broken or improperly maintained ground wire may be a fire hazard. Where exposed to injury it should be run in rigid metal conduit and if protection from induced lightning effects is also desired the ground wire should be electrically connected to the conduit at both ends, or a pipe of non-magnetic material such as brass or aluminum should be employed.

Grounding connections may be made to wet sprinkler or other water pipes where available, but pipes which are liable to be disconnected or taken out of service and dry-pipe sprinkler system should be avoided. Metal plates or metal pipes buried in moist earth, may be used as ground electrodes, if water pipes are not available. Approved terminal lugs should be provided on the ground wire and connection to pipes should be made with approved ground clamps.

Static Ignites Grain Dust

IN 1915 the Department of Agriculture investigated a number of fires and explosions in threshing machines in the northwest section of the United States and it was found that static electricity ignited dust clouds formed during the operation of the machines. The relative humidity was low during most of the threshing season and high static charges were generated. They recommended that various isolated metal parts, including several revolving shafts, be bonded to a common wire and grounded to a rod driven into the earth. This measure effectually prevented static electric fires and explosions in threshing machines.

The Department of Agriculture also investigated a large number of fires in cotton gins in the south and it was found that fires which were originally thought to have been caused by matches or incendiarism were in reality caused by static electricity. When the various metal parts of the machine were bonded together and grounded, the static electricity was effectually dissipated and the fires prevented.

Dust explosions in grain elevators, flour mills, starch mills and similar places may be caused by static electricity unless all metal objects which may become charged with static are effectively grounded. The grounding should include, machinery, shafting, metal bins, metal lining of wooden bins, as well as tie rods, metal ladders, gates, spouts, etc., of wooden or concrete bins, metal screens, driers, conveyor and elevator parts.

(b) Non-Conducting Materials. We will now consider the more difficult problem of grounding or discharging non-conducting stock, power belts, conveyor belts, etc.

Grounding Belts

BELTS. Power belts and conveyor belts generate static electricity freely, potentials of 20,000 to 75,000 volts having been observed. In very hazardous places it is preferable to eliminate belts entirely by using direct drive, metal chain or metal gear drive. If belt drives must be used, the static hazard can be reduced by operating the belts at low speed, but in all hazardous places one of the following methods should be employed to discharge the static electricity which may be generated even on low speed belts: (1) apply a dressing which makes the surface of the belt

a conductor, or (2) provide a grounded metal comb or collector rubbing on the belt or nearly in contact with it at the points where it leaves the pulleys.

Formulas for dressings having low electrical resistance for both leather and rubber belts have been prepared by the Bureau of Chemistry, U. S. Department of Agriculture, but the effect of the belt dressing is not permanent and repeated applications are necessary at various intervals depending on local conditions. In view of this uncertainty, the use of grounded collectors is frequently preferred.

Collectors of various kinds have been employed to eliminate static electricity from belts. Some are of thin metals and quickly get out of order, especially those which are placed in contact with the belt. One of the best designs, and one which requires very little attention, consists of a row of sharp steel points mounted on 1-inch centers in a length of angle-iron which is grounded and rigidly supported close to the belt near the point where it leaves each pulley. The pulleys, which should be of metal, should be grounded, also metal guards and other isolated bodies of metal near the belt.

Ground Moving Machinery

STOCK, Fabrics, etc. Dangerous charges of static electricity are generated on various non-conducting materials, which are passed more or less continuously through processing machines. This includes rotogravure printing presses, coating and spreading machines, etc. All metal parts of the machines should be thoroughly grounded, but this will not remove the static from the non-conducting material passing through it.

One method of accomplishing this is by means of brass or copper chains attached to a grounded metal bar extending across the machine above the material and near the points where the static is generated. The chains should be spaced on about 1-inch center and should be long enough to touch the surface of the material. The links should be kept clean and free from corrosion to keep the electrical resistance low.

If the character of the work makes it difficult to keep the chains clean, thin bronze or aluminum strips, screen wire, or tinsel may be employed; or if contact between the collectors and the material passing through the machine is objectionable, fine bronze wires formed into a long "brush," which is grounded and suspended so that the ends of the wires are near but not actually in contact with the material, will effectually remove the static charges.

Sparkling Workers

WORKMAN Hazards. Charges of static electricity are frequently found on the workman; especially at times of low humidity. The charges

9 Seconds to Safety



A fire bursts out on the top floor of your plant. Your men scramble madly down flight after flight of steep and slippery steps or icy rungs to get to the ground, constantly menaced by lashing flames. At best it would take them three to seven minutes apiece to get down, unless they fell.

Even a minute is a pretty long time to stay close to a blazing inferno. Dizzy flights of steep steps are not so safely traveled when everyone is pushing and shoving and in a hurry.

We're telling you this because we've eliminated the dangerous stairways and fire ladders, the exposure to weather and flames, and hundreds of seconds of the escape-time in a modern and safe Potter Chute.

Specifically, it takes nine seconds to descend from the top floors in a Potter Chute. The Chute is scientifically constructed so that it is easy to get into, cannot be blocked by either natural causes or human panic, and those using it cannot be reached by flames as is so often the case with open type fire escapes.

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MARKS

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WHAT DID YOU FIND?

Weren't You Shocked to Discover So Many Gapping Openings?

Have You Any Idea of the Massive Network of Interior Channels Back of Those Hair-Line Cracks?

Did You Ever Stop to Think How Water Is Getting Through the Face of the Concrete with Such Conditions Existing,—and How Much?

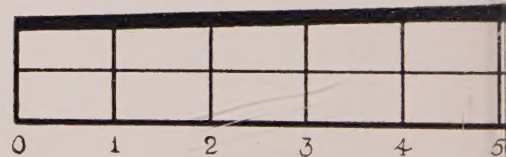
THE CAUSE:

WATER

ONLY

THE RESULTS:

Freezing and Thawing
Corrosion of Steel
Deterioration of Concrete
Volumetric Variations Causing Excessive Cracking
Many Others



Call in **BEN J. MANY** C

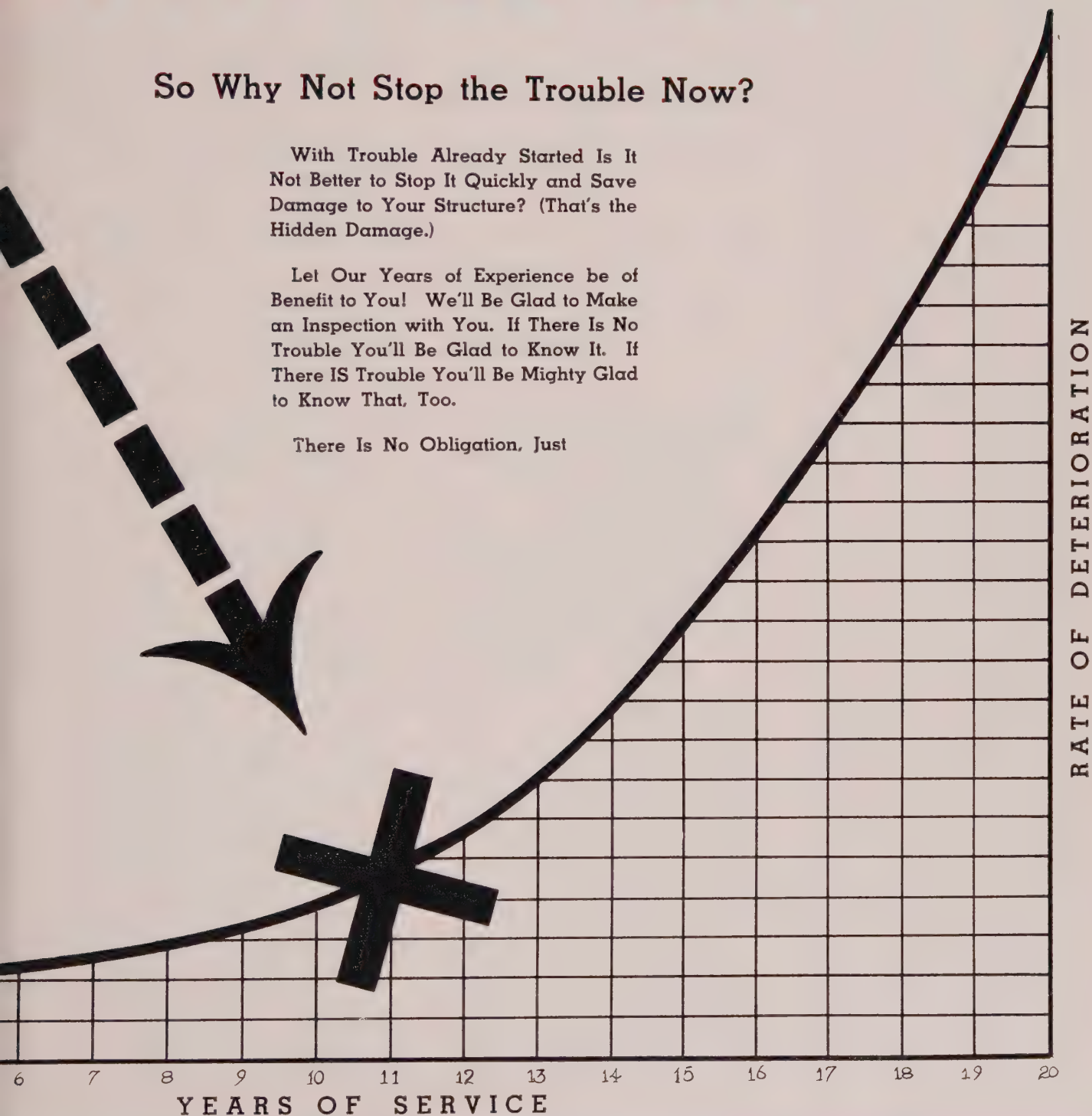
THE SPOT

So Why Not Stop the Trouble Now?

With Trouble Already Started Is It Not Better to Stop It Quickly and Save Damage to Your Structure? (That's the Hidden Damage.)

Let Our Years of Experience be of Benefit to You! We'll Be Glad to Make an Inspection with You. If There Is No Trouble You'll Be Glad to Know It. If There IS Trouble You'll Be Mighty Glad to Know That, Too.

There Is No Obligation, Just



ORPORATION

**30 N. LA SALLE ST.
CHICAGO, ILLINOIS**

may be generated by the clothes, by rubbing the soles of shoes on non-conducting floor coverings, or by various industrial operations. The human body is a good conductor and in most cases the charges are conducted to ground through the shoes and clothing which are ordinarily moist enough to transmit them as fast as generated. Some people, however, have an especially dry skin and accumulate high static charges more rapidly than others, because there is little or no leakage to ground through the clothing. Such workmen should not be employed where volatile flammable liquids are handled or where there is danger of dust explosions.

In especially dry weather, or in rooms where the relative humidity is low, static charges may accumulate on the bodies of workmen to a potential of several thousand volts. Some method of grounding them has thus been necessary in many locations. Workmen should not be allowed to wear rubbers, rubber boots or rubber soled shoes in hazardous areas, and under some conditions it may be advisable for them to wear specially made shoes having copper nails or copper wire stitching through the soles. It may also be necessary to have them stand on grounded non-ferrous metal plates. Care must be taken, however, not to allow the soles of the metal floor plates to become covered with any insulating substance.

Increasing the relative humidity, as previously described, is helpful where conditions are not particularly severe.

Processing, Fumigation Worries

(c) Storage and Handling of Flammable Liquids. Static electricity is generated when liquids flow through pipes, when they are poured or discharged from one container to another, when they are filtered or when solid streams flow through the air and are broken up into drops. The charges are neutralized or conducted to earth as fast as they are generated unless the liquids have a high electrical resistance. The resistance of some liquids, such as water, alcohol, and glycerine, even though considered high in the ordinary sense, is low enough to prevent dangerous or objectionable charges. On the other hand, gasoline, benzol, and carbon bisulphide have very high electrical resistances and cause dangerous charges on their containers and on conducting objects which may be in contact with them.

Wherever flammable liquids of high electrical resistance and low flash point are used, handled, or stored, thorough bonding and grounding should be employed. It should include storage tanks, stills, pipe lines, churns, mixers, auto-claves, etc. Pipe lines handling such liquids should also be electrically bonded together and to tanks and other receptacles to which they are connected. Bonds should be connected around all joints which may

be insulated by packing materials or gaskets.

Special methods are required for grounding and bonding portable containers. At loading and unloading stations for tank cars, the track should be grounded and bonded to the filling or discharge pipe. There should also be a temporary bonding conductor between the filling or discharge pipe and the car. This conductor should be connected before any filling or discharge connections are made and should not be disconnected until after these pipe or hose connections are removed. Similar temporary bonding conductors should also be provided for tank ships and for tank trucks as well as for small metal cans and containers which are filled from larger ones.

Tests

ALTHOUGH ample ventilation should be provided in rooms where flammable gases, vapors, or dusts are present, it is advisable to

ON THE FACE OF THE EVIDENCE



make tests for static electricity in these hazardous places. Tests made during periods of relatively high humidity are not conclusive and should be repeated when the relative humidity is low. Tests should be made with great care in dangerous locations since the person making the test, or the instrument used, may become charged and cause a fire or explosion. The person, as well as the instrument, should be brought to ground potential frequently during the process of testing by making connection with a good ground. This grounding, however, should be done in a non-hazardous area where a static spark will do no harm.

Tests for static electricity can be made with an electro-static voltmeter, neon tube tester, or gold leaf electroscope. The electrostatic voltmeter can be calibrated to indicate the potential of the charge but it is not well adapted for portable use in a manufacturing plant. The neon tube tester,

originally designed for testing automobile spark plugs and more recently used in modified form as a circuit tester, makes a very satisfactory, inexpensive, and portable instrument for detecting the presence of static electricity in manufacturing plants. However, it does not show the amount of potential of the charge.

The gold leaf electroscope is very sensitive and in its ordinary form is too delicate for general use in a manufacturing plant. However, its electrostatic capacity is so small that there is little danger of a spark when it is charged and discharged.

Questions and Answers

THE following discussion took place after Mr. Turkington's address, before the National Fire Protection Association:

Q.: In grounding to prevent the accumulation of heavy static charges, does the ground resistance have to be low?

A.: No.

Q.: What is meant by "electrically bonded" type lines?

A.: A common pipe joint ordinarily offers sufficient electrical bonding, but gaskets and flanges that may insulate one section from another should be guarded against. The liquid passing through the pipe line cannot be depended upon to maintain a ground.

Q.: Is there great danger from static in spraying operations?

A.: Theoretically such operations would generate static electricity, but actually no trouble has been experienced from this source. It is quite probable that the object being sprayed carries off the static charge.

Q.: Should not a differentiation be made between an intermittent static discharge and static flow.

A.: Yes. An intermittent discharge or one which occurs only occasionally, will not ordinarily ignite fibrous or dusty materials. But in static flow, where the discharges are continuous, the first few charges will dry out the material sufficiently so that a subsequent discharge might ignite it.

Q.: What is the best way to test a ground?

A.: Check it with an ohm meter or a ground tester.

Dust Explosion Meeting

DR. David J. Price has suggested the next meeting of the Dust Explosion Hazards Committee of the NFPA be scheduled for the first week in December at Chicago, advises Hylton R. Brown, now Senior Engineer of the Bureau of Mines, Department of the Interior, Pittsburgh, his new location.

It is hoped that at this gathering a report will be presented for adoption on applying light suction on all heads and other transfer points not now permitted.

Cover Basement Belts

DULY approved Amendment (Item 602-A) to Safety Code 562 by the Committee on Dust Explosion Hazards says: "All conveyor belts except those on which movable trippers are used should be provided with a hood covering extending the entire length of belts and terminating at belt dischargers equipped with adequate positive air aspiration as required under Item 603. Canvas properly flame-proofed or other approved material should be used for this purpose."

In the large belts conveying grain in the tunnels underneath grain bins, the movement of the belt itself is sufficient to carry the dust through underneath and thus a new method of keeping these tunnels clean and safe is very conveniently provided.

Credit for the development of this anti-explosion device is due Mr. Frank L. Neilson, past President of the Society of Grain Elevator Superintendents and Vice-President of Cargill, Incorporated, Minneapolis. Mr. Neilson developed the idea originally and carried through much of the research on it.

Films Available

THE Society's dust explosion and safety films are available to those in the industry wishing to educate their crews on the hazards involved. The small rental charge of \$5 is made for the films, without projectors, f.o.b. headquarters.

Likes Safety Films

THE Safety Films circulated by the Superintendents' Society were shown in our plant. We consider them very interesting and impressive, and were very glad to have had the opportunity of showing them.—C. W. Mays, Plant Manager, Larowe Milling Company, Division of General Mills, Rossford, Ohio.

ARGENTINE CORN TO CANADA

ARGENTINA is successfully bidding for the Canadian corn market, some 358,000 bushels going there earlier this month in competition with South African corn.

ALCOHOL FROM WHEAT

ALCOHOL from wheat can be mixed with gasoline to form a satisfactory motor fuel, according to experiments by the Canadian National Research Council. This would make it unnecessary to import tetraethyl lead, which would be replaced by the alcohol as an "anti-knock" agent. A market for 25,000,000 bushels of wheat would thus be afforded were it not for the present excessive costs.

THESE EASY PRECAUTIONARY STEPS

FORESTALL Insect TROUBLE

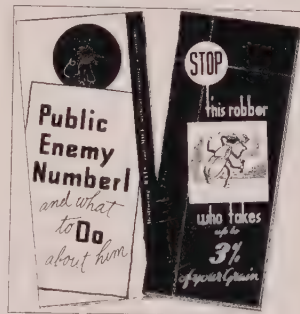
TREAT INCOMING GRAIN with LARVACIDE to kill the pests before they can get a foothold. Costs little, takes almost no extra time, kills egg life and larvae, along with the adults.

A one time job—saves money on time, labor, and fumigant.

TREAT BIN BOTTOMS to clean up any left-over infestation that might start up trouble in newly arrived shipments.

TREAT GRAIN WHILE TURNING—This occasional application of LARVACIDE is sound (and inexpensive) insurance against pest damage.

RATS CAN'T TAKE IT—Fumigating for Weevil also helps control rodents—and they die out in the open. No carcass nuisance. For Rats only, light dosage, a pint per 7,000 cubic feet, does the job. Traces of LARVACIDE, lingering in retreats make practically certain there'll be no new tenants for a long time.



SAFER ALL AROUND—After aeration, no trace of LARVACIDE remains. Tends to sweeten grain and relieve it of any musty odor. Cuts accident risk. Any good fumigant will kill humans, too, but LARVACIDE's inseparable self-warning won't let anyone without a mask willingly enter or stay in concentrations considered dangerous.

Write for "STOP THIS ROBBER" — and "PUBLIC ENEMY NO. 1" — interesting booklets which tell how to control Weevil and other Pests.

Larvacide

CHLORPICRIN

Cylinders 25-180 lbs. and 1 lb. bottles, each in safety can; 6 and 12 to wooden case. Stocked in major cities.

INNIS, SPEIDEN & CO.

Established 1816

117 Liberty Street New York

CHICAGO • CLEVELAND • BOSTON • PHILADELPHIA • OMAHA

Rebates in Order

IF YOU are one of those who attended the Toronto convention, taking a direct route going and having a return ticket on the same line, you are entitled to a refund if you decided to return via Buffalo and paid the local rate from Toronto to Buffalo.

Letters of explanation should be directed to Mr. W. M. Bell, Canadian Pacific R. R., 71 East Jackson Blvd., Chicago.

ONLY ONE RULE

There is only one rule for being a good talker: learn to listen.—Christopher Morley.

HOPE'S LIKE THAT

Hope is like the sun, which as we journey toward it, casts the shadow of our burden behind us. — Samuel Smiles.

WHEAT GROUND INCREASING

WHEAT ground during August, 1940, totaled 40,474,213 bushels, according to the Department of Commerce, which compared with 38,920,968 bushels during July, 1940, 42,745,637 during August, 1939, and 38,832,794 during July, 1939. Since Jan. 1, 304,334,977 bushels have been ground compared with 313,539,461 bushels for the same period a year ago.

Safety Is A Value

"Aw, he's just blowing off steam."

That's an expression we hear very often when some fellow gets het up about something and starts "telling the world off."

The same thing is true when a boiler builds up too much pressure—a safety valve releases it . . . Nervous tension is eased by quiet talk, music, or laughter. In almost anything one can think of, excesses are dangerous and there are always definite safety valves to offset these dangers.

Wouldn't it be wise to equip your elevator with a safety valve? Suppose an explosion DOES occur, now? No real outlet for the pressure is provided and so it grows until finally it provides one for itself by knocking out floor, concrete walls, roof and all.

ROBERTSON SAFETY VENTILATORS not only reduce to a minimum the possibility of an explosion occurring by cleaning out fine floating dust, but, should an explosion happen, the damage is small due to a continuous venting of gases and dust by the ventilators.

ROBERTSON CAPACITY BIN VENTILATORS keep ventilation well-balanced in bins and prevent dangerous back-drafts by displacing air pressures.

ROBERTSON PROTECTED METAL ROOFING AND SIDING is a practical and economical guarantee against deterioration from weather and fumes. It is used for every type of industrial building, throughout the world.

Write for catalogs.

H. H. ROBERTSON CO.

Farmers Bank Bldg.

Pittsburgh, Pa.

Dust Committee to Meet

THE Dust Explosion Hazards Committee of the National Fire Protection Association has scheduled a meeting for Monday, December 2nd, in Room 421-A of the Stevens Hotel, Chicago, according to announcement from Mr. Hylton R. Brown, Senior Engineer of the U. S. Department of Interior, Pittsburgh.

Mr. Joseph G. Schmitz, Chief Weighmaster of the Chicago Board of Trade and a member of the sub-committee on dust removal, will report on the application of a disconnected suction hood over the heads for the removal of the light, suspended dust which, authorities agree, is the dangerous, explosive dust. Mr. Schmitz has been conducting a number of tests along this line and will give the results of his findings as well as the stand of the Weighmasters' Association. This latter body is expected to make some concessions in the interests of safety to lives and property.

On tests made by Mr. C. J. Alger, Corn Products Refining Company, Argo, President of the Chicago Chapter of the Supers' Society, only seven pounds of dust were removed in 1,000 bushels of corn handled which loss doubtless does not equal even the average shrink experienced by most receiving plants.

Mr. Maynard Losie, Hallet & Carey Company, President of the Minneapolis Chapter of the Supers' Society, cites the improvement in housekeeping conditions possible with such an arrangement.

Mr. Brown will be glad to have anyone interested attend this conference.



Grain Loadings Steady

EXPORT traffic through Atlantic and Gulf ports in September was approximately 42 per cent greater than a year ago, according to the Association of Railroads. Grain, however, showed only spotted gains and many losses due to the accumulating stores held by the government and totaled 446 cars compared with 4,063 last year.

Loadings totaled 37,274 cars for the week ending Oct. 12, 39,387 for Oct. 5th, 39,392 for Sept. 28th, 40,943 for Sept. 21st, and 42,494 for Sept. 14th.

Cumulative loadings since Jan. 1st reveal that 1,395,475 cars were loaded with grain and grain products for the first 39 weeks of the year, which includes through Sept. 28th. This compared with 1,455,932 last year, 1,488,729 in 1938, 1,321,045 in 1937, and 1,388,455 in 1936—the latter two years being below the current period.

Hosts Getting Active

SOME time past I called a meeting of the Supers to discuss plans, place, etc., for our approaching annual convention, and to appoint heads of the committees necessary for such an affair. I believe we have chairmen who are capable and willing to do a real job. The following is a list of the chairmen and their functions:



Jack Coughlin,
Brooks Elevator Co., Program;

M. M. Noxon,
Ralston-Purina Co., Entertainment;
Mr. E. S. Ferguson, Manager, Atlantic Elevator Co., Operators' Committee;
George Patchin, Appraisal Service Co., Associates' Committee;
Paul Christensen, Van Dusen-Harrington Co., Reservations & Housing;
Pat Bohan, Searle Elevator Co., Reception Committee;
Maynard Losie, Chapter President, Hallet & Carey Co., Transportation Committee;
Vin Shea, Van Dusen-Harrington Co., Publicity, and
Jim Auld, Hales & Hunter Co., Membership.

Our present committee on attendance is to act in this capacity for the convention.—Paul H. Christensen, Van Dusen-Harrington Co., First Vice-President, Society of Grain Elevator Superintendents, Minneapolis.

Corn Gas

AN EXPERIMENTAL government laboratory has just been opened at Peoria, Ill., where special attention will be given to the development of synthetic products from corn. These products will include synthetic rubber, plastics, substitute fibers and supplementary motor fuels.

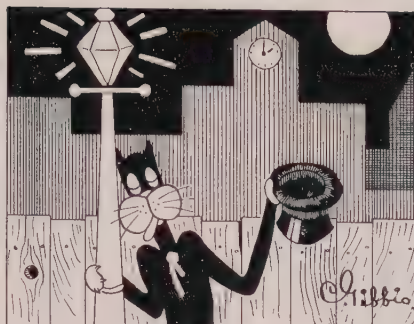
In foreign countries where the cost of gasoline is high, alcohol blends are used extensively as motor fuel. As yet this is not feasible here because we have a plenty of gasoline and the price of corn is too high.

It would have to be about 25c a bushel to be economically practical, however a ten percent blending of the 22 billion gallons of gasoline consumed in the United States last year with vegetable alcohol would have used approximately 900 million bushels of corn. A much larger plant capacity than we have now would also be needed.

Scientifically blending is practical but certainly it is not commercially possible as yet. There will be a tremendous market for grain if alcohol blends ever do become commercially used in the United States.

SNOOPER

The Boiler-Room Cat



Most machines work best when well oiled—but, the human machine is the exception. Get rid of the employee who thus endangers his fellow workers.

L. H. DesIsles

THE death of Leonard H. DesIsles, President and Treasurer of the Zeleny Thermometer Company, Inc., of Chicago, on September 26, marks the passing of a self-made man who worked untiringly from the bottom to the top of the ladder of success and made a place for himself in the hall of business fame.

The son of one Captain Samuel Y. DesIsles and Mary Jane DesIsles of East Lamoine, Maine, he came into this world June 16, 1867, a direct descendant of those French people who under the personal leadership of Madame DeLaunay, earliest settled Lamoine, Maine, in the eighteenth century. At the age of fourteen years he got his first job, was told to clean up a pile-driving scow, and never having seen soft coal before, shoveled a pile of it overboard, and then told the owner he'd have to get some wood to fire the boiler.

From then on he followed up engineering, serving on a sardine boat, captained by his father, all the time studying for a Chief Engineer's license. He shipped aboard the Steamer "Sappho," plying between Mt. Desert Ferry and Bar Harbor, Maine, operated by the Main Central Railroad. Starting as Second Engineer he soon worked up to the position of Chief Engineer. It was during this period of his career he conceived the idea of the Journal Alarm System, so well known to the Grain Trade and still in use in many of the present day elevators of wood construction, although it was primarily invented for use on engine bearings and did not come into service in grain elevators until Mr. DesIsles came to Chicago and established the Western Fire Appliance Works.

Leaving the "Sappho" he signed aboard the Drexel steam yacht as Engineer for a trip abroad. On his return he decided to give up the sea and settle down to follow up his invention. He started in business in Boston with the Electric Heat Alarm Company, at 145 High Street, later being

sent to Chicago, Ill., to establish the Western Fire Appliance Works. In 1912 he bought an interest in a Thermometer System from the inventor, Mr. Anthony Zeleny, who later sold out his interest to Mr. DesIsles, and the Western Fire Appliance Works, also became the installers of the Zeleny Thermometer System. In 1926 the Western Fire Appliance Works incorporated under the name "Zeleny Thermometer Company, Inc."

Now taken from "Who's Who in Chicago" we find him graduating from Commercial College, Rockland, Maine, in 1890, married Carrie Linwood Clement on September 22, 1893. Republican, Mason, Unitarian.

Through his natural inventive genius Mr. DesIsles had several United States' patents to his credit.

REGISTRATION OF ALIENS

By December 26, 1940, more than 3,600,000 aliens will have been registered in the U. S. Since there is a heavy penalty against aliens who will not have registered by that time, however, the Department of Justice is urging that all employers cooperate and help their people in order to prevent penalties against innocent but ignorant employees.

Most employers have been found to be only too willing to cooperate and posters and registering information have been printed in twelve different languages for their use. Assistance may be given to registering aliens, citizenship status may be determined at the time of registration, and registering stations are generally being kept open in the evenings to give fair opportunity to day workers.

The Department of Justice emphasizes particularly three things: Report any change of address after registration, informational literature is available and is gladly distributed, and above all avoid such things as blanket discrimination against aliens—this if anything would hurt the program seriously and would most decidedly be unfair and harmful to the country in general.

BOUQUETS, THANK YOU

I FEEL the magazine "GRAIN" is getting better and better with more things every month that are particularly interesting and helpful to the average Terminal Superintendent. I know I have several copies with portions cut out of them and foot notes written on the pages, and I have them all filed away for future reference.—L. C. Irwin, Superintendent, Searle Terminal Ltd., Fort William.

AND HE DOESN'T MEAN GOLF

When you get right down to the root of the meaning of the word "succeed," you find that it simply means to follow through.—F. W. Nichols.

Can You or Can't You?

BACK pay will be due men whom you refused to hire, if the only reason for your refusal was their union membership.

IF an employe brings a Wage-Hour Law suit against you, you cannot discharge him and if you do, the probability will be that you will have to reinstate him with back pay.

SPONSORING a back-to-work movement in which supervisory officials participate, persuading individual workers to return, representing that some employes have returned of their own initiative to other employes and the public, and saying or showing that strikers are stopping renewal of work are all violations of the Wagner Act. Such strike combating tactics are illegal.

DEDUCTIONS may be made from wages which would bring employes "free and clear" wages below the minimum wage if they are made for board and lodging or other non-profitable facilities, or for taxes, union dues or other legalities of like nature.

CONSTRUCTION of new buildings are beyond the scope of the Wage-Hour Law, but alterations of buildings already in commercial use are subject to the law.

STRIKERS, who refuse to return for work under the terms made by a majority-representing union, may be refused re-employment.

That Is The Question

POLLS to determine the attitude of workers toward a planned strike are illegal even though such a poll may have been requested by other employes.

THE Wagner Act protects workers who take unified action to alter their working conditions whether they are in a union or not.

EMPLOYES, union or non-union, may be discharged on the basis of immorality. Providing, of course, that such immorality can be proven.

YOU can refuse grievances presented by a minority union, provided that refusal does not coerce employes into a choice of a bargaining representative.

UNION employes who disobey company rules may be discharged without a violation of the Wagner Act.

FINE POINT

IT IS against the new laws to disestablish a company-dominated union and then recognize a new union not affiliated with a national labor organization unless there is a complete cleavage and difference between the old union and the new union. Successor unions which are assisted by the company are not recognized.

NO APPRENTICES

YOU cannot have men working for you just for experience and without pay, for this would be a violation of the Wagner-Hour Law. Learners can be paid less than the minimum wages if an application is made stating the necessity for having beginners in your business.

APPRENTICE EXPENSE DEDUCTIBLE

EXPENSE incidental to the training of apprentices is chargeable to business expense and can be deducted for federal income tax purposes.

WATCHMAN AND TAXES

A CONTRACT may be made with a patrolman to watch your property without Social Security taxes on his fees if the patrolman also has contracts with other merchants. Merchant police, directly employed do not come under this decision, they are counted as employes.

RESERVE CORP DISCHARGE

YOU might be granted a discharge as an army reserve officer if your rank is below captain if you have dependents and if active service for a year would entail considerable economic sacrifice.

WAGE-HOUR EXEMPTION BASIS

IF only 1% of your product is involved in interstate commerce, you can claim exemption from the Wage-Hour Law.

INTER-PLANT TELEPHONES

INTRASTATE telephone lines are not under the jurisdiction of the FCC. It would be therefore possible for you to have a private plant telephone line connected with a local telephone system without FCC sanction. State public utility commissioners have jurisdiction over such matters.

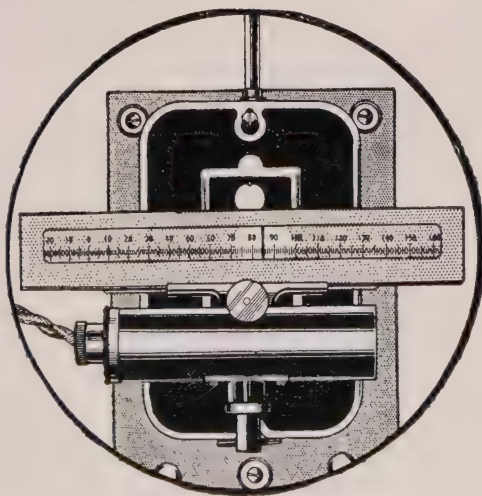
BROKERAGE PAYMENTS

PRODUCERS that sell to members of a trade association operated by you cannot pay brokerage fees to you. This would violate the brokerage section of the Robinson-Patman Act.

TOO CLOSE FOR COMFORT

DIPLOMATIC dispatches report an unpublicized attempt by German troops to land on Greenland. The report states that the Germans, disguised as fishermen, had been ordered to land and seize Greenland's radio stations. The attempt is said to have been frustrated by a British cruiser patrol operating out of Iceland.—U. S. News.

IS THERE A DOCTOR IN THE HOUSE?

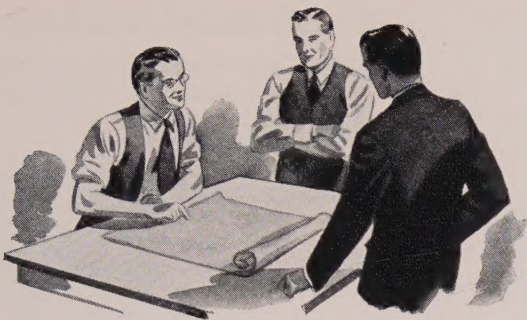


When the grain in your storage is sick you can't make a grain bin stick out a tongue and say "Ah". Install a Zeleny System—it will tell you at all times.

ZELENY THERMOMETER COMPANY

542 South Dearborn Street

Chicago, Illinois



THEIR EXPERIENCE WORKS FOR YOU

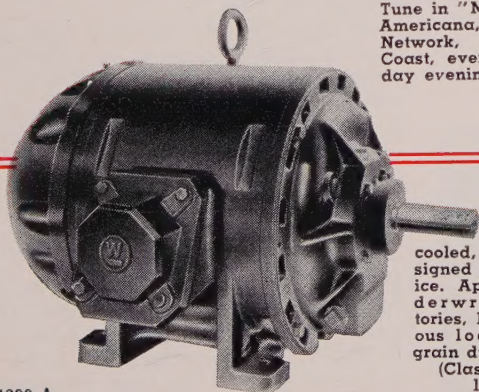
A group of "specialists," men experienced in elevator and milling methods and equipment, helps you apply your Westinghouse purchase more profitably.

Every piece of Westinghouse equipment you buy is backed by the experience of these "specialists," who not only design apparatus better fitted to each elevator or milling requirement, but who also see that it is properly applied to give you 100% performance.

Your Westinghouse salesman sees that you get this service every time you place an order with him. We suggest that you call on your local Westinghouse office or agent for every electrical need.

WESTINGHOUSE ELECTRIC & MFG. CO.
EAST PITTSBURGH, PA.

Tune in "Musical Americana," N.B.C. Network, Coast-to-Coast, every Tuesday evening.



J-94290-A

Explosion-resistant motor, totally enclosed, fan-cooled, specially designed for milling service. Approved by Underwriters' Laboratories, Inc., for hazardous locations where grain dust is prevalent. (Class II Group G locations.)

Westinghouse

ELECTRICAL PARTNER OF INDUSTRY



It doesn't take long for "NU-HY" buckets to PROVE their SUPERIORITY

Take advantage of this economical way of increasing your elevator capacity. No expenditure is required for new belts, drives, or casing alterations. The scientifically-designed NU-HY Grain Bucket allows continuous spacing if required, more bucket load without side-spill, and is equally efficient in pick-up and discharge at low, intermediate, or high practical belt speeds.



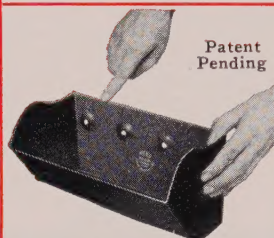
THE Nu-Hy

GRAIN BUCKET

Trade Mark Reg. U. S. Pat. Off.

Send now for Engineering Bulletin, also Capacity Analysis Form

76, which will enable us to make engineering recommendations that we guarantee will result in definite capacity increases and lower maintenance costs.



Patent
Pending

NU-HY Buckets are neatly designed in one-piece welded construction. All bands, overlaps, and other pick-up and discharge obstructions are eliminated.

Screw Conveyor Corporation

707 HOFFMAN ST.

HAMMOND, IND.

SCREW CONVEYORS



ELEVATOR BUCKETS

TRADE MARK REG.

U.S. PAT. OFFICE

You're Bound to Win in the Annual Safety Contest

YOU can't possibly lose, for there are no blanks in this game. You win every time.

It's true there are only four silver cups to be awarded to the holders of the best safety record during the year ending next June 30th. But the real winners may not have the best safety records. The real winners will be those who have avoided the greatest number of accidents. Those who have saved a life, protected an employee from loss of a limb or taught their crews to be careful. They may not win silver cups, but they will win the real battle.

Join in this campaign to reduce accidents by removing the causes for accidents. Help your industry reduce the accident rate, the cost of insurance, the tragedy of crippled men. Join today.

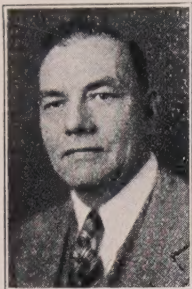
FOURTH ANNUAL SAFETY CONTEST

Society of Grain Elevator Superintendents

4100 Board of Trade Building
Chicago, Illinois

Weller Plant Repaired

WITH the careful assistance of H. L. "Roy" Heinrichson, Terminal Grain Corporation, Sioux City, Mr. B. I. Weller has been able to get that one brick back into place that was struck by lightning (see August GRAIN). Roy figured out an ingenious solution to the entire difficulty.



HIS FINGER HEALED

PEYTON A. (Jim) KIER of Standard Milling Company at Kansas City and Secretary of the Kansas City Chapter of the S.O.G.E.S., has been suffering with a broken finger for the past several weeks, but it is completely healed now. We're certainly glad you're tip-top again, Jim.

Kansas City Chapter Doings

THE October meeting of the Kansas City Chapter was the long-awaited Ladies' Night, and we are very pleased to report that the total attendance was forty-four. The Strolling Troubadours furnished entertainment with music and songs and games.

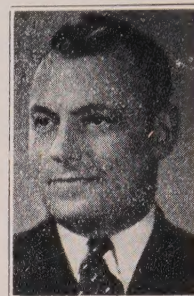
President Percy Poulton of the SOGES visited Kansas City on October 16, and was given a real Kansas City welcome at a dinner given by Past President T. C. Manning.

To Start Drive

JUST as soon as a few more of the boys get over their rush so that a group of us can get together we are planning on going after new members in earnest. I feel that with business as good as it is and the convention coming up, we should be able to add several new names to our roles.—Paul H. Christensen, Van Dusen-Harrington Co., First Vice President, Superintendents' Society, Minneapolis.

No Hot Air in Wonderblast

THE boys over at the Arcady Farms Milling Company sure must have a swell time. Their big twelve page bulletin, THE ARCADY WONDERBLAST, just came out. Everything from Mustache Derbies to the ramifications of broom repairing (by dipping the handles in molasses) is discussed. They have radio programs at noon hour, news items about the employees, poems, baseball leagues, and are really and earnestly in the Safety Contest. Their big picnic has been set for August 31st.



Association-minded Gilbert P. Lane, Plant Manager, is Editor-in-Chief; 'Hank' Keir is head-scribe. They're doing a fine job and deserve a lot of credit for their initiative and their execution of this important personnel relations work.

Seasonal Exemption Hearings

OF particular interest to those engaged in "storing" grain will be the formal hearing on fourteen weeks' seasonal exemption, which hearing is scheduled for December 9th in Chicago.

JOINS SEED TRADE BUREAU

MR. PARKE W. BURROWS has become associated with the staff of the Seed Trade Reporting Bureau of Chicago, according to announcement just received. He becomes Assistant General Manager of this grain and seed testing equipment manufacturing and distributing business founded in 1912.

Mr. Burrows was formerly with the Ralston-Purina Company in Pittsfield, Mass., and later in St. Louis. He is a graduate of Amherst College, Amherst, Mass., and the Graduate School of Business Administration of Harvard University.

CORN GRIND UP

CORN ground by 11 refiners of starches, syrups, sugars and other derivatives totaled 5,937,663 bushels during the month of September, according to the Corn Industries Research Foundation. This compared with 5,450,391 bushels during August.

HMMM. THAT MAKES A DIFFERENCE

A man's opinion of others invariably reflects his own character with astounding accuracy.



Bart Pow Honored

"BART" POW was a very happy man the night of August 30th. Fort William was presented with a splendid new Scottish musical organization and "Bart" was the presiding chairman. The new Girls' Pipe Band made its debut and it was a very gala occasion.

"Bart's" Scottish blood was all of a tingle and I know he pictured the girls' band demonstrating for our members at the next convention we hold in Fort William. They are very smart and colorful and they will give our members a big thrill when that happy day comes around.

Arvid Anderson Improving

ARVID ANDERSON, Omaha, formerly Superintendent for the Crowell Elevator Company, is improving constantly after month upon month of being confined, writes Mrs. Anderson. "We all hope that in time he will be able to walk again.

"Please remember him to his many revered friends in the Superintendents' Society," she writes.

Started with Grass Roots

I AM immensely pleased to have been able to make any small contribution to the grain business of Canada and the United States and thank you for the extra copies of "GRAIN" containing my article.

When I lived in Western Canada I was intimately connected for six years with the Winnipeg Grain Exchange through the development of elevators. At that time I was building branch line extensions for the Canadian Pacific and all the several companies were anxious to have sites for erecting country grain elevators at the stations on the new lines. This brought me into close contact with the grain business, sometimes rather fretfully.

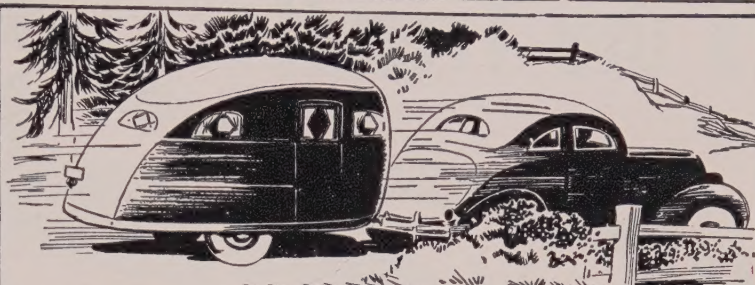
Here's the best wishes for the continued success of the Society of Grain Elevator Superintendents.—T. C. MacNabb, General Superintendent, Canadian Pacific Railway, New Brunswick District, St. John.

(Mr. MacNabb addressed the Superintendents' convention on "Grain Exports Through St. John," which was published in a recent number of GRAIN.)

Unaccustomed as I Am . . .

LOUIS AMBLER, JR., Superintendent of The Glidden Company's new 2,000,000 bushel elevator, in Chicago, is scheduled to address the Oak Park "Y" Men's Club on "Soybeans, Present and Future," on December 5th.

THE POCKETBOOK of KNOWLEDGE BY TOPPS



THE TRAILER INDUSTRY, BORN DURING THE DEPRESSION, NOW INCLUDES 350 MANUFACTURERS EMPLOYING THOUSANDS OF WORKERS



SPOONS 2 FEET LONG WERE USED IN ENGLAND IN THE TIME OF QUEEN ELIZABETH (USED TO REACH OVER THE LARGE RUFFS WORN AT THAT TIME)

SNAKES CANNOT CLOSE THEIR EYES. . . . NOR CAN THEY HEAR — THEY HAVE NO EYELIDS OR EARS



TAXES PAID LAST YEAR BY 150 LEADING CORPORATIONS AMOUNTED TO \$514 PER EMPLOYEE



OL' KING COTTON

COTTON NOW GOES TO THE RETAIL MARKET IN MORE THAN 10,000 FORMS INCLUDING CELLULOSE, RAYON, SMOKELESS POWDER, PLASTICS AND FINISHES

CEDAR RAPIDS GETS OK FROM DULUTH

OSCAR OLSEN of Peavey's Duluth Terminal Elevator paid Mr. H. C. Brand of the Quaker Oats Company and Cedar Rapids, Iowa, a short visit a while ago. The fine condition of the Quaker Oats plant there led Oscar to



accuse Herb of cleaning up just for his inspection. However, after a tour of the beautiful City of Cedar Rapids, Oscar decided that maybe perhaps being in good shape was just a natural condition down there.

Likes Picture

I WANT to thank you very much for the picture used on your July cover. It is more than appreciated. I am having it framed and will put it in my office.—Mr. A. H. Kellogg-Clarke, President, Verity Mills, Inc., Buffalo, N. Y.

It's Your Turn

YOU enjoy reading the contributions of others in the industry. Now it's your turn to come through with something they'd enjoy reading in return. Will you send it in today?

LIKED IT

JUST received "GRAIN." Nice edition.—H. L. "Roy" Heinrichson, Superintendent, Terminal Grain Corporation, Sioux City, Ia.

"GRAIN" sure is O. K. — Oscar Knoebel, Stratton Grain Company, Springfield, Ohio.

Borrow Needed Money On Inventory It's the Trend!



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